

# WATER TEMPERATURE

MURDER  
UNDER THE  
MICROSCOPE

These activities will give you and your group some valuable information which might help you when solving the crime.



Look for and collect articles or advertisements relating to water temperature. These might show how widespread and how serious water temperature issues can be.

## Does the temperature vary in a large body of water?



1. Is all water the same temperature?
2. Is a lake the same temperature as a river?
3. Is the ocean the same temperature as a river?
4. Are there times when a lake or river might be warmer or cooler?



# What happens to life in the water when temperature changes?



Using the internet, newspapers and other sources of information find the answers to these questions:

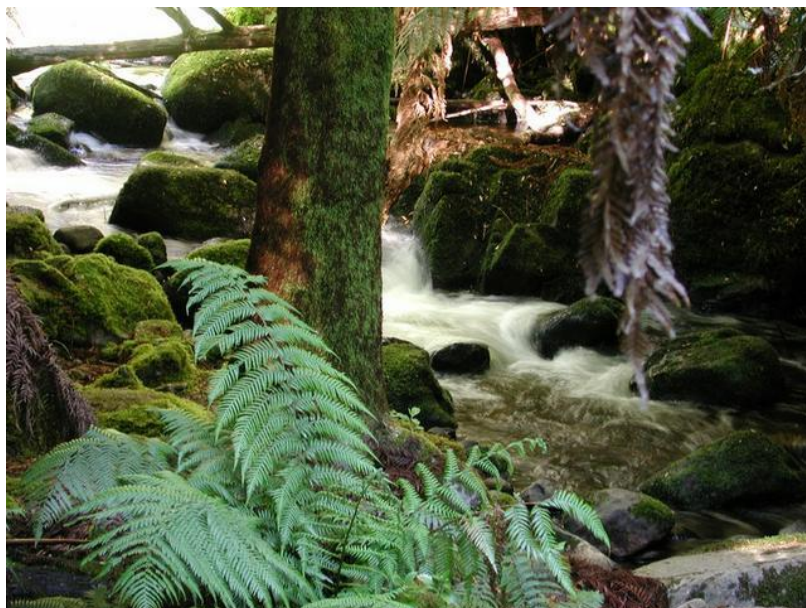
1. What happens when the temperature in a river rises? What happens when it falls?
2. How do these changes affect life in the river? Why?
3. Which plants and animals are most affected?

Hint: Think about the importance of oxygen.

To present your answer you could:

- Draw a flow chart
- Draw a cartoon strip
- Paint a picture and label it

## Who or what might cause changes in temperature in waterways?



Changes in the temperature can be caused by natural means and activities related to humans. Use your sources of information to find out how water temperature is changed.

Draw up a chart like the one on the following page. Then complete the chart using your ideas.



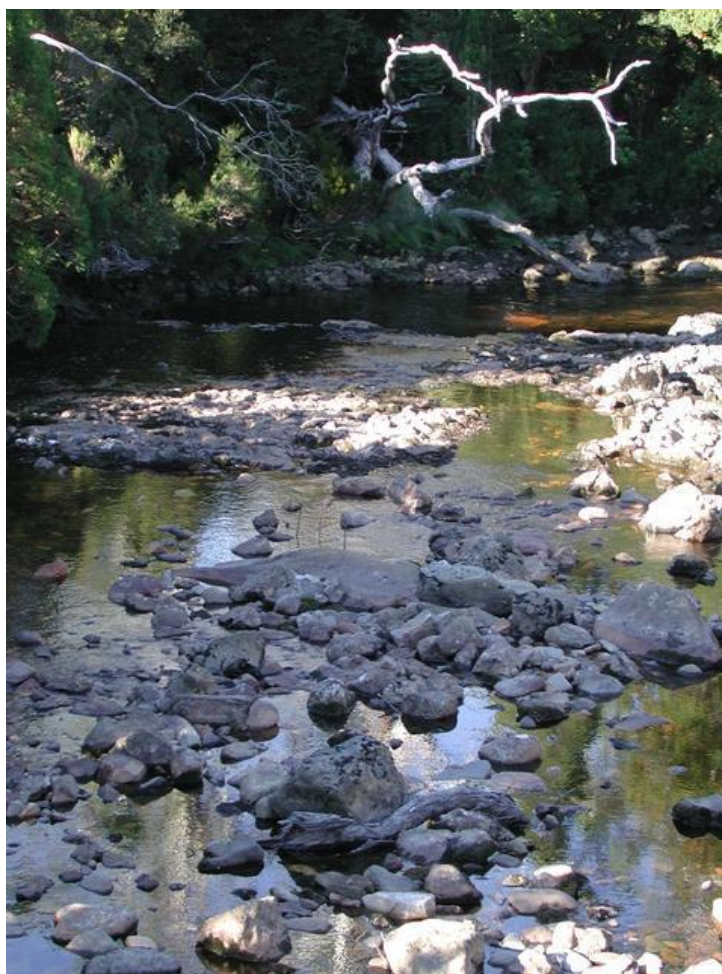
<i><b>Activity</b></i>	<i><b>Effect</b></i>
Water is released from dam	Water from dams is often released from the deepest parts so it is colder.
Spring snow melts	Cold water is released as snow melts
Factory outflow	???

## Where has it happened?

Investigate one river system, such as the Murray-Darling system, where damage to the river is well documented.

Find out about the temperature changes in the water of the river. Find out what other changes accompanied the changes in temperature.

Write a short paragraph explaining the combined effects of temperature and other factors on the river.



## Activity: Does the temperature affect what happens in a body of water?



Try this:

1. Set up a two containers of water, each containing some water plants. Put one container in a warm spot and one container in a cool spot. Leave the containers for one week.
2. What happens? Write a description of the differences you can see in the two bodies of water. Draw what you see.

## Extension

Repeat the experiment above, regularly adding chilled water to one container of plants, and water at room temperature to the other container.

Graph or draw the plants before you begin adding the chilled water to the container and again after one week. Note the changes that occur.

## Sharing information



What have you found out that might help you understand the crime? Share this information with the other groups.

You will need to explain how water temperature can affect the waterways.

Prepare a presentation to get your message across to the rest of your team.